OPTION-545VIP USB 200/400x Video Inspection Probe
OPTION-545VIP
USB 200/400x Video Inspection Probe
Product Introduction

March 2014

Anritsu Corporation
## OPTION-545VIP Product Introduction

### VIP Series Support Products

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*1: Mainframe’s software version  
*2: PC analysis software for G0306A (Support Windows XP, Windows 7(32bit, 64bit) and Windows 8(32bit, 64bit))  
*3: PC analysis software for OPTION-545VIP (Support Windows XP)
OPTION-545VIP Product Introduction

OPTION-545VIP Video Inspection Probe

Scratches and stains to optic fiber ferrule endfaces are often said to have a negative impact on transmission quality. The OPTION-545VIP can be connected to an MT908x Series ACCESS Master, MT9090A Network Master Series product and PC, to show the state of a ferrule endface. This function is effective for determining whether a ferrule endface is clean, and whether connector replacement is necessary due to connector scratches.

[Image of the OPTION-545VIP Video Inspection Probe interface]
When a Connector Endface is Dirty...

When a connector endface is dirty, it tends to produce a greater amount of reflection. A good connection can be maintained by cleaning connector endfaces.

Optic Fiber Clad

Dirty connector endface

Clean connector endface

Verification through OTDR Output Port Connection

Oil, Dust
When a Connector Endface is Damaged...

When a connector endface is damaged, in addition to having a greater amount of reflection, it also tends to exhibit greater splice loss. When the amount of reflection or loss caused by the damage is high, the connector port needs to be replaced.

Optic Fiber Clad

Scratch Near Core

Verification through OTDR Output Port Connection
OPTION-545VIP Product Introduction

● MT9083x2 Series ACCESS Master

● MT9090A Series Network Master
  μOTDR: MU909014/15
  DCFL: MU909011, OCA: MU909020A, GigE: MU909060A

● Windows XP PC

μOTDR include Pass/Fail analysis function
(Software version 2.10 or later)

include Pass/Fail analysis function
(Software version 1.03 or later)
OPTION-545VIP Product Introduction

OPTION-545VIP Video Inspection Probe
(1) Standard Soft case
(2) Video Inspection Probe
(3) USB converter
(4) Tips for measurement
(5) Operation Manual
(6) Software CD

FS-PT-USB-CASE Hard case (Option)
(7) Hard Case for VIP
OPTION-545VIP Product Introduction

OPTION-545VIP Accessories

Tips are connected to the end of the VIP based on the shape of connector (adapter) to be connected.

This unit comes standard with 5 types of tips.

- **FS-PT-FC** For FC Connector Adapters
- **FS-PT-ST** For ST Connector Adapters
- **FS-PT-SC** For SC Connector Adapters
- **FS-PT-U125** For 1.25mm Universal
- **FS-PT-U25** For 2.5mm Universal
Examples of Tip Connection

- **Tips for FC Connector Adapters**
  As this figure shows, the ferrule endface of the connected fiber can be checked via this FC connector adapter.

- **Tips for SC Connector Adapters**
  As this figure shows, the ferrule endface of the connected fiber can be checked via this SC connector adapter.

- **Tips for 2.5mm Universal type**
  As this figure shows, the universal type tip can be used to directly plug into the ferrule for test.
Basic Video Inspection Probe Operation

Scroll up or down to adjust the focus.

Scroll up and down to select the magnification. The magnification is either 200x or 400x. Scroll all the way up or down.
1. The VIP USB terminal is connected to the MT9083x2 series instrument's USB port.

2. The power is turned on. "Video Inspection Probe" is selected from the top menu.

*Before starting, select the appropriate tip for the connector adapter and ferrule type to be connected to.
Adjust the focus in the Live screen, and press the Start button to begin analysis.

When analysis completes, the following information appears:
- Core
- Cladding
- Adhesive
- Contact
As well as a pass/fail determination for the total area for each.

Press f6 to toggle between Details (Table) and Image View.
From the Table View, you can identify “defects” or “scratches” on the end of the fiber.

(1) Defects in each area.
(2) Scratches in each area.
(3) Overall determination for each area merging (1) and (2)

The automatic pass/fail determination is made in accordance with the IEC61300-3-35 standard.
Saving the Measurement Results

You can manage the measurement results in either of the following ways.

**Save to File**
- Screen capture (PNG format)
- VIP data file (file with .vipi extension)

**Load from File**
- PNG file
- VIP data file (file with .vipi extension)

You can also create a PDF report on the system.

Sample PDF Report
OPTION-545VIP Product Introduction

Examples of Measurement Using the MT9090A Series μOTDR (MU909014/15)

(1) The VIP USB terminal is connected to the MT9090A's USB port.

(2) The power is turned on. When unit has started up, the VIP screen will be displayed automatically.

*The screen will also be displayed automatically if the VIP USB terminal is connected after the MT9090A has been started.

*Before starting, select the appropriate tip for the connector adapter and ferrule type to be connected to.
Adjust the focus in the Live screen, and press the Start button to begin analysis.

When analysis completes, the following information appears:
- Core
- Cladding
- Adhesive
- Contact
As well as a pass/fail determination for the total area for each.

Press F2 to toggle between Details (Table) and Image View.
From the Table View, you can identify “defects” or “scratches” on the end of the fiber.

(1) Defects in each area.
(2) Scratches in each area.
(3) Overall determination for each area merging (1) and (2)

The automatic pass/fail determination is made in accordance with the IEC61300-3-35 standard.
Saving the Measurement Results

You can manage the measurement results in either of the following ways.

**Save to File**
- Screen capture (PNG format)
- VIP data file (file with .vipi extension)

**Load from File**
- PNG file
- VIP data file (file with .vipi extension)

You can also create a PDF report on the system.
The VIP USB terminal is connected to the MT9090A's USB port.

The power is turned on. When unit has started up, the VIP screen will be displayed automatically. *The screen will also be displayed automatically if the VIP USB terminal is connected after the MT9090A has been started.*

*Before starting, select the appropriate tip for the connector adapter and ferrule type to be connected to.*
Measurement Screen (MU909011, MU909020, MU909060)

When "Live" is selected on-screen, the display screen will change in real time to reflect focus adjustments, etc. Use this display mode to check the status of the ferrule endface.

To save an image, press the F1 key on the MT9090A while the image you wish to save is displayed on-screen. The image display will change to "Frozen". Pressing the F2 key when the image is frozen will cause the MT9090A to save the image data to the internal memory (in png format).
Examples of Measurement With the Windows XP PC

To use the VIP with a Windows XP PC, you must first install the driver, located on the "Software CD" included as a standard accessory with the fiber scope.

The VIP USB terminal is connected to the PC USB port.
At first, switch between "Live" and "Freeze". When the "Live" mode is selected, changes such as focus adjustments will be reflected in real-time.

To save an image, click "Freeze" while the image you wish to save is displayed on-screen. The "Save As..." window will appear, enabling you to save the displayed image.
Performing Pass/Fail Evaluation

The ferrule endface's cleanliness, etc. can be analyzed on-screen, and Pass/Fail judgment can be performed.

Clicking "Test Fiber" will cause analysis to be performed. Ferrule endface dirtiness (blue) and damage (yellow) levels which exceed their respective thresholds will be displayed.

Analysis can be performed for individual areas. Ex.)
- Core section (Epoxy Ring)
- Clad 10μm to 62.5μm area (Zone A)
- Clad 62.5μm to 125μm area (Zone B)

The overall evaluation will be displayed in terms of Pass or Fail.
## Ordering Information

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<th>Model No.</th>
<th>Description</th>
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<td>200/400x Video Inspection Probe</td>
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<td><strong>- Standard accessories -</strong></td>
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<td>Tips</td>
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<td><strong>- Accessories -</strong></td>
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<td>FS-PT-USB-CASE</td>
<td>Hard Case</td>
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### OPTION-545VIP Supported...
- MT9083x2 ACCESS Master
- MT9090A Network Master
  - (MU909014/15: μOTDR, MU909011:DCFL, MU909020:OCA, MU909060:GigE)
- Windows XP PC